

WHAT IS CLAIMED IS:

- 1 1. An intramedullary rod kit for fixation of a distal radius fracture, the
2 intramedullary rod kit comprising:
 - 3 an intramedullary rod comprising:
 - 4 a diaphyseal segment including at least one first mounting section configured to
5 receive a tensioning device,
 - 6 a middle segment; and
 - 7 a joint segment including at least one second mounting section configured to receive
8 a tine,
9 wherein the diaphyseal segment, the middle segment, and the joint segment define a
10 curved configuration that is substantially similar to a curvature of the intramedullary canal of
11 a human radius.
 - 1 2. The intramedullary rod kit of claim 1 wherein the joint segment includes an
2 opening into a longitudinal channel that extends along a portion of a length of the
3 intramedullary rod.
 - 1 3. The intramedullary rod kit of claim 2 wherein the longitudinal channel
2 includes a threaded portion.
 - 1 4. The intramedullary rod kit of claim 1 wherein an outer diameter of the
2 intramedullary rod varies between approximately 10 mm and 25 mm at the joint segment and
3 approximately 2 mm and 9 mm at the diaphyseal segment.
 - 1 5. The intramedullary rod kit of claim 1 wherein an outer diameter of the
2 intramedullary rod varies between approximately 12 mm and 15 mm at the joint segment and
3 approximately 3 mm and 5 mm at the diaphyseal segment.
 - 1 6. The intramedullary rod kit of claim 1 wherein an outer diameter of the
2 intramedullary rod varies between approximately 14 mm at the joint segment and
3 approximately 3 mm at the diaphyseal segment.

1 7. The intramedullary rod kit of claim 1 wherein the joint segment has one of a
2 round cross-section and an oval cross-section.

1 8. The intramedullary rod kit of claim 1 wherein the diaphyseal segment has a
2 round or a generally round cross-section.

1 9. The intramedullary rod kit of claim 1 wherein a length of the rod is between
2 approximately 50 mm and 100 mm.

1 10. The intramedullary rod kit of claim 1 wherein a length of the rod is
2 approximately 80 mm.

1 11. The intramedullary rod kit of claim 1 wherein the first mounting section
2 comprises at least one channel having a threaded inner diameter.

1 12. The intramedullary rod kit of claim 11 further comprising at least one bone
2 screw configured to be passed through the first mounting section to mount the intramedullary
3 rod to a diaphyseal portion of the radius.

1 13. The intramedullary rod kit of claim 12 wherein the bone screw is one of a
2 unicortical bone screw and a bicortical bone screw.

1 14. The intramedullary rod kit of claim 2 further comprising a guide configured to
2 be mounted to the intramedullary rod and configured to orient drill guides to be collinear
3 with the first mounting section and the second mounting section of the intramedullary rod.

1 15. The intramedullary rod kit of claim 14 wherein the guide is mounted to the
2 intramedullary rod by insertion of a portion of the guide into the longitudinal channel in the
3 intramedullary rod.

1 16. The intramedullary rod kit of claim 15 wherein the portion of the guide that is
2 inserted into the longitudinal channel is threadably inserted into the longitudinal channel.

1 17. The intramedullary rod kit of claim 1 wherein the tine comprises a shaft and is
2 mounted to the rod in the second mounting section.

1 18. The intramedullary rod kit of claim 17 wherein the second mounting section
2 comprises a channel that includes a threaded portion and the tine includes a first non-
3 threaded section and a second threaded section that is configured to be threadably mated to
4 the threaded portion of the channel.

1 19. The intramedullary rod kit of claim 17 wherein the second channel includes a
2 threaded portion and the tine includes a first threaded section and a second threaded section
3 that is configured to be threadably mated to the threaded portion of the channel.

1 20. The intramedullary rod kit of claim 19 wherein the first threaded section
2 includes threads that are configured to be threadably mated with the bone fragment.

1 21. The intramedullary rod kit of claim 1 wherein the tine comprises an insert
2 from which at least one shaft extends and the insert is configured to be mated to the second
3 mounting section.

1 22. The intramedullary rod kit of claim 21 wherein the shaft is integrally formed
2 with the insert.

1 23. The intramedullary rod kit of claim 22 wherein the insert includes a channel
2 configured to receive a screw and the intramedullary rod includes a threaded channel
3 configured to receive the screw.

1 24. The intramedullary rod kit of claim 23 wherein the opening in the
2 intramedullary rod further comprises an opening extending through the intramedullary rod
3 and configured to receive the shaft.

1 25. The intramedullary rod kit of claim 1 further comprising a snap fit tine
2 including a head having an opening into which teeth protrude and from which a tine extends
3 and wherein the second mounting section includes a channel around at least a portion of the
4 circumference of the intramedullary rod and from which teeth protrude and the head is
5 configured to be mated with the second mounting section.

1 26. The intramedullary rod kit of claim 1 further comprising a tensiometer
2 mounted to one or more of the intramedullary rod and the tine and being configured to
3 measure a tension exerted against one or both of the intramedullary rod and the tine.

1 27. The intramedullary rod kit of claim 26 further comprising:
2 a transmitter for transmitting the measured tension; and
3 a receiver for receiving and displaying the measured tension.

1 28. The intramedullary rod kit of claim 1 further comprising written instructions
2 for use.

1 29. The intramedullary rod kit of claim 1 further comprising an instructional
2 video.

1 30. The intramedullary rod kit of claim 1 further comprising a drill bit configured
2 to drill a hole in bone tissue.

1 31. The intramedullary rod kit of claim 1 wherein the tensioning device comprises
2 a tie band fastener including a tie band, a slid able tab, and a stop.

1 32. The intramedullary rod kit of claim 1 wherein the tensioning device comprises
2 a molly bolt system that includes a head, a nut, and one or more flexible arms extending
3 between the head and the nut.

1 33. The intramedullary rod kit of claim 1 wherein the diaphyseal segment of the
2 intramedullary rod comprises a dimpled surface.

1 34. The intramedullary rod kit of claim 1 wherein the intramedullary rod, the
2 tensioning device, and/or the tine are coated with a therapeutic agent.

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